Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ TP: \_\_\_\_\_\_\_\_

CW#100: Q4 Stations Review

Geometry

Directions: You will have exactly 15 minutes to work at each station. Each station consists of 8 problems. You should only be working on problems for that station. You may use your notes and work with other students on these problems. Write final answers to your stations work on this sheet. Include all units in your final answers. Pay attention to whether the question asks for exact or approximate answers. IF, and only if, you are told to work through all 4 stations, do so. If not instructed to do so, only do stations 1 – 3.

**Station 1: Triangles and their Properties \_\_\_\_\_/8**

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| --- | --- | --- | --- |
| 1) | 2) | 3) | 4) |
| 5) | 6) | 7) | 8) |

**Station 2: Perimeter and Area \_\_\_\_\_/8**

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| --- | --- | --- | --- |
| 1) | 2) | 3) | 4) |
| 5) | 6) | 7) | 8) |

**Station 3: Grab Bag! \_\_\_\_\_/8**

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| --- | --- | --- | --- |
| 1) | 2) | 3) | 4) |
| 5) | 6) | 7) | 8) |

**Station 4: PUSH IT TO THE LIMIT! \_\_\_\_\_/10**

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| --- | --- | --- | --- | --- |
| 1) | 2) | 3) | 4) | 5) |
| 6) | 7) | 8) | 9) | 10) |

**Station 1: Triangles and their Properties**

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| --- | --- | --- |
| 1) Find the value of ‘Y’ in the triangle below. Leave your answer in radical form. | | 2) Which of the following will solve for the value of x?    A.  B.  C.  D. |
| 3) In the figure below, ABC is a right triangle with a right angle at C. Which of the statements about this figure is NOT correct?  A   1. sin A =   10   1. cos A =   8   1. cos B =   B  6  C   1. tan A = 2. tan B = | | 4) In the figure below, lines PQ and TS are parallel, and lines QS and PT intersect at point R. The measure of PRQ = 34 and the measure of p = 17. Find the measure of S. |
| 5) In the figure below, and  intersect at point M. , and the angle measures are as marked. Find  A  C  R  32  62  D  B | | 6) WILD CARD! Danny is buying groceries at the store and if he spends more than $20, he will be able to use his 15% off coupon. If he buys 2 cartons of milk for $3.99, 4 boxes of cereal for $2.35, and a gallon of ice cream for $4.95, what is his total bill at the register? |
| 7) What is the cosine of A?  A  25  B  7  C | 8) You have an extension ladder that you are using to repair a chimney. Which of the following is a trig ratio that could be used to find the length required for the extension ladder to reach a height of 14 ft for the chimney?   |  |  | | --- | --- | | A.  B.  C.  D.  E. |  | | |

**Station 2: Perimeter and Area**

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| --- | --- |
| 1)  Screen Shot 2012-03-11 at 5 | 2) The length of rectangle ABCD is 4 units longer than the width. If the perimeter of the rectangle ABCD is 88 units, what is the area of the rectangle? |
| Use the scenario below for questions 3 - 5.  The box for a 16 inch pizza (a pizza 16 inches in diameter) from Papa John’s is square-shaped and leaves room for one inch on each side of the pizza. | |
| 3) How many square inches is the area of the base of the pizza box? | 4) If an advertisement is printed on the base of the pizza box, what is the value of the area that will be seen before the pizza is eaten? Round to the nearest tenth. |
| 5) If the pizza is cut into 8 equal pieces with 8 congruent central angles, what is the length of one piece’s crust? | 6) A park wants to put a fence around a baseball field in the shape below. Each straight side of the fence is 80 feet long, and the rounded side is an arc that measures 90. How many feet of fencing does the park need to purchase? Leave your answer in terms of pi. |
| 7) An outdoor pool is 13-feet-by-10-feet. The owners want to double the area of the pool, extending the previous 10-foot width by 3 feet. By how many feet will the 13-foot length increase? | 8) A square and a semicircular region have the same perimeter. If the length of the radius of the semicircular region is 12, what is the length of one side of the square? Leave your answer in terms of pi. |

**Station 3: Grab Bag!**

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| 1) A locker combination consists of three numbers between 0 – 29. Each number may only be used once in the combination. How many different combinations can be made? | 2) Simplify:  A. 9  B. -9  C. 0  D. 18  E. Undefined |
| 3) In the standard (x, y) coordinate plane, a certain line is represented by the equation 6x + y = – 3. At what point will the line cross the x-axis? Write your answer as a coordinate point. | 4) Find the slope of the line that goes through the points (0, 5) and (-3, -4). |
| 5) Triangle ABC lies in the standard( x, y) coordinate plane, with points A(-4, 1), B(-6, 5), and C(2, -7). The triangle is translated five units to the right creating triangle DEF. Then the triangle is reflected across the x-axis creating triangle GHI. What are the coordinates of point G?  A. (1, 0)  B. (1, -1)  C. (0, 1)  D. (-1, 1)  E. (-1, 0) | 6) The Jenner family was planning on taking a road trip from Chicago to Milwaukee, WI, which is 250 miles. Instead, they decided to go to Springfield, IL, which is 730 miles from Chicago. On a certain map, each inch equals 60 miles. On that map, how much longer is the trip to Springfield than the trip to Milwaukee? |
| 7) For all nonzero values of , , and , the expression is equivalent to what? | 8) In the standard (x, y) coordinate plane, a certain line has the equation y = 2x – 4. What is the equation of the line that passes through (4, -8) and is perpendicular to the first line? |

**Station 4: PUSH IT TO THE LIMIT!**

|  |  |
| --- | --- |
| 1) Brandon is going to cover his bathroom with tiles, and he plans to put the tiles next to each other so there is no space in between them. The tiles are rectangular prisms that are 4 in tall by 3 in wide by 6 in long. If Brandon’s bathroom is a rectangle that measures 4 feet by 8 feet, what is the minimum number of tiles he will need to fully cover his bathroom floor? | 2) Quadrilateral 1 is a rectangle and Quadrilateral 2 has four right angles. Which of the following must also be true?   1. Both shapes are squares 2. Both shapes are parallelograms 3. Both shapes are rectangles 4. I only 5. II only 6. I and II 7. I and III 8. I, II, and III |
| 3) BE is parallel to CD. Find the measure of BC. | 4) One diagonal of a rhombus is 8 cm long and the other diagonal is 6 cm long.  a) What is the length of one side of the rhombus?  b) What is the perimeter of the rhombus? |
| 5) The area of the face of a cube is 100 cm2. Which of the following is the volume of the cube, in cubic centimeters?   1. 10 2. 100 3. 1,000 4. 10,000 5. 100,000 | 6) At Java Joe’s Coffee Shop they sell 5 flavors of coffee, offered in small, medium, or large sizes. Each coffee can be purchased with or without whipped cream and with or without caffeine. How many different ways can a Muchin teacher order a coffee? |
| 7) Solve for m: | 9) A sink is clogged and water is pouring onto the floor. After 5 minutes, the water is 2 inches in diameter. After 10 minutes, the water is 8 inches in diameter. After 15 minutes, the water is 32 inches. Which of the statements below describes the flow of water pouring from the sink?  A. The rate at which the water is pouring onto the floor is increasing over time.  B. The rate at which the water is pouring onto the floor is decreasing over time.  C. The rate at which the water is pouring onto the floor is constant.  D. Cannot be determined |
| 8) If t = 2p + 9 and 8 = 2k + p, what is t in terms of k? |
| 10) A square has an area of 49 in2. What is the length of the diagonal of the square (leave in radical form). | |